



Magillem Generator Studio

Enabling standard extensions to Magillem functionalities and direct access to the IP database

Description

Magillem Generator Studio is a user-friendly and powerful environment to help designers implement, launch and debug their own executables (“generators”) in order to extend the capabilities of their IP based design environment.

In a multi-vendor tools and IP based system, preserving data integrity and a unique description when building a flow requires a single information backbone to monitor constant accesses to files and tools configurations using different data formats.

Magillem offers a capability to store IP parameters and files in a structure whereby all the facets of the IP can be retrieved easily when building a flow. Using indexing technique, it is possible to directly access and modify tool configurations and IP databases through a 100% secure process that uses the so-called TGI (*Tight Generator Interface*), the well known standard defined by the SPIRIT consortium as the standard access to any IP-XACT database. Integrators, IP providers and tool vendors can exchange information and add functionality to the design environment, with their own specific *generators* (i.e. executable objects in IP-XACT terminology).

This mechanism allows customer specific features to be added easily on top of Magillem standard functionalities, without heavy customization or programming.

In addition, TGI generators can be reused in all IP-XACT compliant tools, bringing great benefits in term of cost and tool independence. For example, generators can be implemented for the following needs:

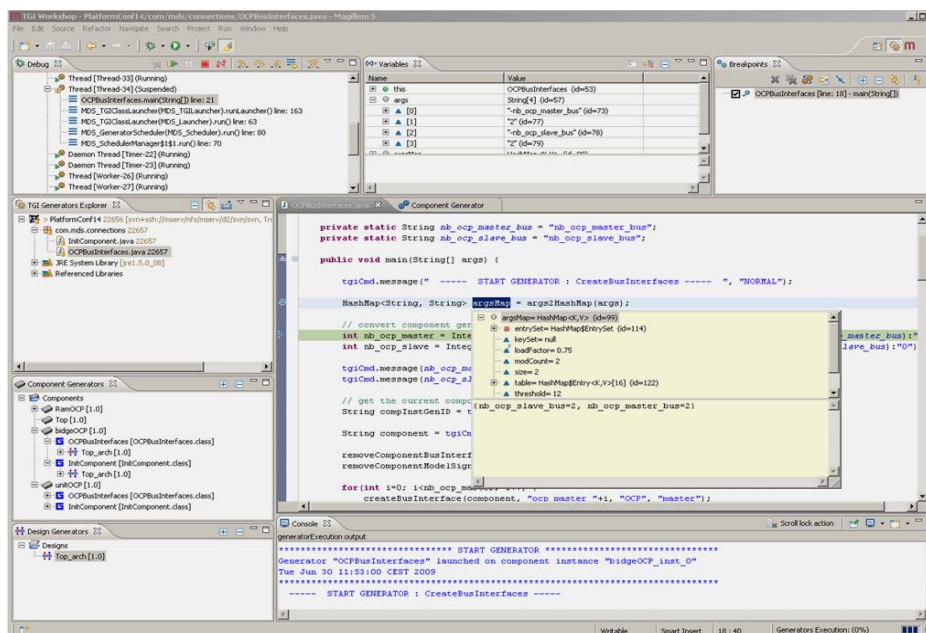
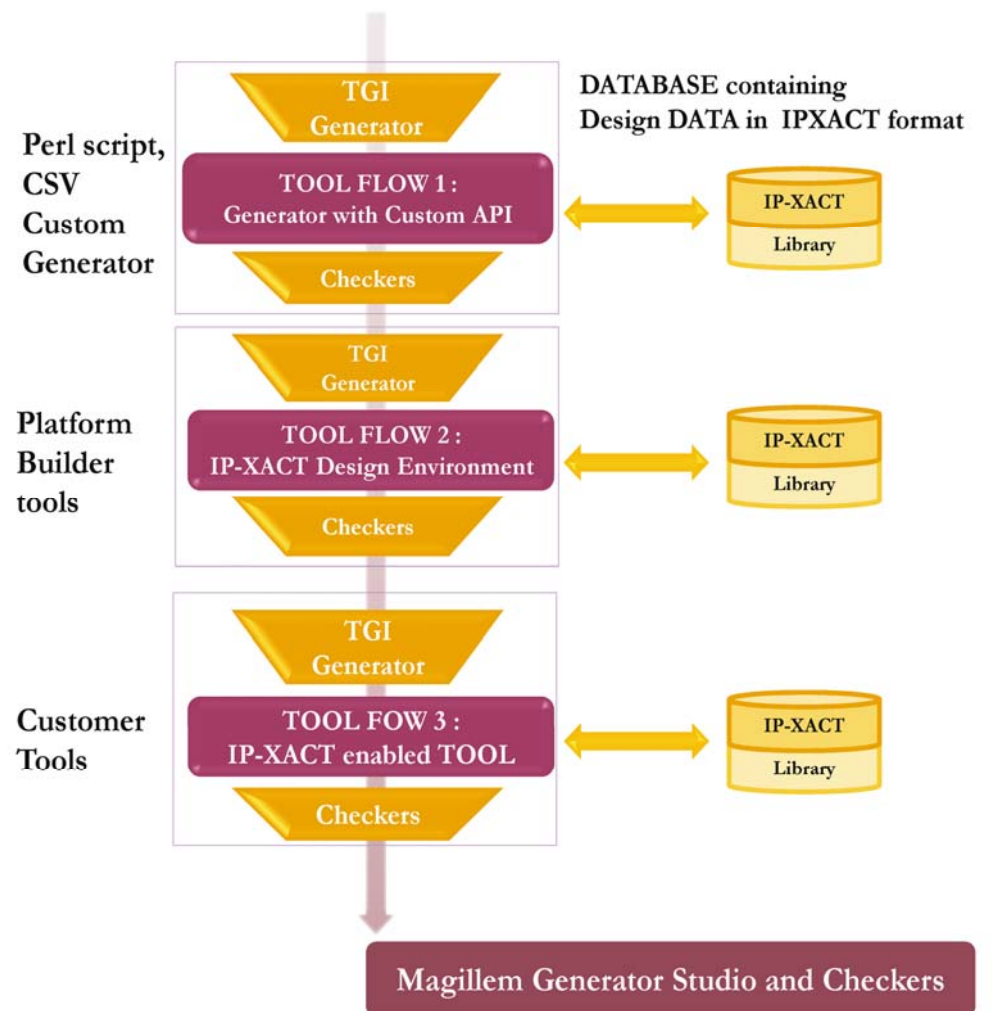
- Configuration of an IP into a system and automatic integration checks (for an IP provider)
- Design Rule checking and sub-system automatic partitioning (for an integrator)
- Point-tool wrapping of an existing legacy flow for a smooth transition to IP-XACT tools

Moreover, any generator can be executed in “command line” mode. Magillem also provides an **extended API**, bringing additional functionality and high level functions to generator developers.

Features

- Natively Integrated into Magillem Environment
- Ensure 100% error free manipulation of an IP database
- Debugger mode helps developers inspect code, add breakpoints, watch variables and perform many other debug operations
- Generators can be implemented in different languages (Java, TCL, Python...)
- Automatic Completion, dynamic syntax checking and inline documentation in a user friendly environment
- Used in conjunction with MPA (*Magillem Platform Assembly*), the TGI recorder feature can record operations performed in Magillem schematic editor (instantiate and configure components, create connections...) to automatically create a TGI script.
- TGI-like API provided for all previous versions of IP-XACT (1.0, 1.1, 1.2) and support for LGI (Loose Generator Interface)

FLOW defined as a sequence of tools invocation and actions



Magillem Generator Studio interface

Benefits:

- Full support of standard TGI API
- Extended Magillem API provided
- User-friendly environment for generator implementation
- Powerful debugger



Mining your own expertise



Specifications

MGS FEATURES	Premium
IP-XACT v1.0, v1.2, v1.4, and v1.5 certified	X
IP-XACT IEEE 1685 certified	X
Eclipse Environment	
Complete development environment under Eclipse (writing, testing, compiling)	X
Keyword and syntax coloring	X
Context specific (Java, Javadoc) code assistance and guidance	X
Automatic code formatting	X
Margin annotations for problems, break points, or search matches	X
Import assistant automatically creates and organizes import declarations	X
Inline help and documentation	X
Automatic completion	X
Debug Environment	
Debugging features natively integrated (watch variables, insert breakpoints, step by step execution...)	X
Magillem Environment	
Autogenerated IP-XACT generator files	X
Plug and play generator execution into MPA	X
Automatic creation of TGI script with TGI recorder (used with MPA)	X
Component Generator Explorer	X
Design Generator Explorer	X
Various TGI generator templates provided	X
Extension of TGI API	X
Command line generator execution	X

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